



PUMPS

# HIGHEST EFFICIENCIES FOR VARIOUS INDUSTRIAL APPLICATIONS

CENTRIFUGAL PUMP, ACP SERIES

**ANDRITZ**

ENGINEERED SUCCESS

# ANDRITZ Pumps for your industry



Water



Pulp and  
paper



Food



Mining and  
minerals



Power



Other  
industries

**ANDRITZ develops and manufactures high-quality custom tailored pumps for various industries. We supply pumps for different water and waste water applications. ANDRITZ pumps are operating successfully worldwide, for example in water resources management, waste water disposal, as well as large infrastructure projects for irrigation, desalination, and for drinking water and industrial water supplies.**

**Thousands of ANDRITZ submersible motors and pumps have been installed in mines around the world, working under severest conditions in water management and emergency drainage, including the largest submersible dewatering pumps in the world.**

**As plant and equipment supplier to the pulp and paper industry, ANDRITZ provides a complete pump program. Our product portfolio comprises medium-consistency pumps with an innovative fiber separation system, for example, as well as headbox pumps with efficiencies of over 90% and particularly low pulsation.**

**We also supply high-performance and reliable pumps for food applications such as proteins, dairy products, or beverages as well as a complete pump program for the entire sugar and starch industry. To round off the portfolio, ANDRITZ small hydropower plants and pumps used as turbines suitable for the private as well as the municipal sectors, and for industrial and commercial facilities ensure an economic and ecological independent power generation.**



# Premium pumping technology

For over 165 years, ANDRITZ has been a byword for competence and innovation in designing centrifugal pumps. Our end-suction centrifugal pumps are operating in various industrial applications successfully all over the world. They offer robustness and wear resistance, and fulfill highest customer expectations in terms of efficiency, life cycle, maintenance friendliness, and economic efficiency. The high standard of ANDRITZ centrifugal pumps is based on decades of experience in designing hydraulic machines and on extensive know-how. Our goals at ANDRITZ are to provide first-class products and service to secure sustained customer satisfaction.

## ANDRITZ SINGLE-STAGE CENTRIFUGAL PUMPS FROM THE ACP SERIES

are available in a highly wear-resistant, open impeller design. Thanks to their low axial thrust and open channels, these pumps are suitable for conveying many different media. Depending on the impeller design, they can convey slightly contaminated and contaminated media with some solids and content with consistencies of up to 8%.

Thus, operating as processes pumps, they cover a wide

range of applications in the pulp and paper, mining, offshore, power, food, and chemical industry. Additionally, ANDRITZ single-stage centrifugal pumps can also be used in water supply, waste water treatment, desalination plants, and irrigation as well as drainage. A modular system ensures high availability, enables the use of proven components and reduces the number of spare parts to be held in stock. ANDRITZ centrifugal pumps from the ACP series can be delivered with and for an Industrial Internet of Things upward integratable base.

## FIELDS OF APPLICATION

- Pulp and paper industry
- Water and waste water management
- Mining industry
- Offshore industry
- Power industry
- Food industry (e.g. sugar, starch, tomato juice)
- Bioethanol
- Chemical industry

## PRODUCT FACTS\*:

- Flow rates up to 9.000 m<sup>3</sup>/h
- Heads up to 190 m
- Temperatures up to 200°C
- Consistencies up to 8%
- Efficiency up to 90%
- Pressure up to 40 bar

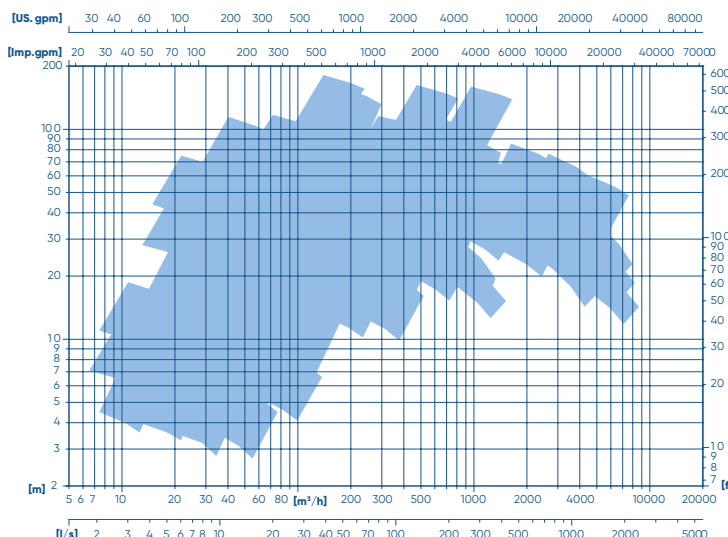
\*These values are guidelines and may differ depending on project requirements



# Single-stage centrifugal pump ACP series

## PRODUCT BENEFITS

- Maximum efficiency of up to 90%
- State-of-the-art NPSH behavior
- Part load behavior better than industry benchmark
- Reduced number of spare parts to be held in stock
- Only seven bearing support sizes for the entire series
- SMARTSEP degassing system
- IIoT ready



## ANDRITZ SMARTSEP-DEGASSING SYSTEM

has been especially designed for high gas content and stock suspensions of up to 8%. An additional separation impeller acting as an integrated degassing system removes gas from the media and conveys fi-

bers reliably back to the pump at the same time. Thus, no additional vacuum pump is needed. The controlling of the degassing valve becomes very easy. When the pump is running the valve is open, but when the pump is not running the valve is closed.

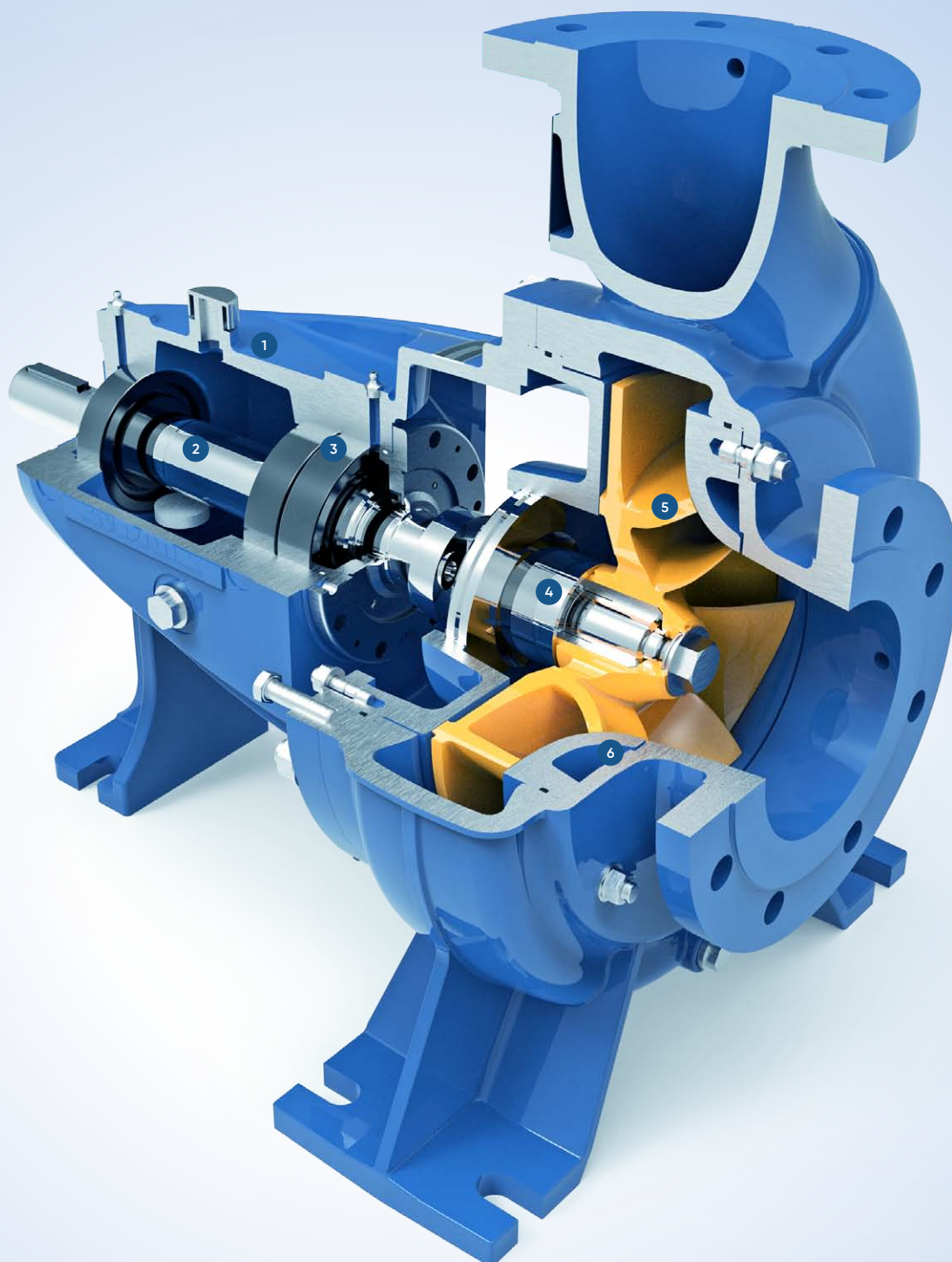
## MATERIAL COMBINATIONS

ACP series	EN-GJL 250	1.4474	1.4021	1.4462	1.4517	1.4517 h	1.4469	5.5610
Impeller		■			■	■	■	■
Casing/casing cover	■	■					■	■
Bearing housing	■							
Front lining		■			■	■	■	■
Stuffing box body	■	■					■	■
Shaft			■	■				

### European standard

Number	Name	Grade	UNS
5.1301	EN-GJL 250	Class 40B	/
1.4474	X3CrNiMoN27-5-2	Grade 1A	J93370
1.4462	X2CrNiMoN22-5-3	S32205	S32205
1.4517	GX2CrNiMoCuN25-6-3-3	Grade 1C	J93373
1.4517 h	GX2CrNiMoCuN25-6-3-3	Grade 1C	J93373
1.4469	GX2CrNiMoN26-7-4	Grade 5A	J93404
5.5610	EN-GJN-HB555 (XCr23)	Grade 3D	F45009
1.4021	X20Cr13	420	S42000





**1 BEARING SUPPORT**

- Single casting with integrated lantern
- Only seven bearing support sizes for the entire series

**2 SHAFT**

- Ensures minimum shaft deflection and low mechanical vibration

**3 TOUGH BEARINGS**

- Long service life

**4 SHAFT SEALING**

- Single mechanical seal for stock conveyance without sealing and rinsing water
- Double mechanical seal
- Dynamic seal

**5 IMPELLER DESIGN**

- Open, semi-open or closed
- Special impeller for tomato paste and fruit concentrate

**6 WEAR LINING**

- One wear lining to protect the pump casing



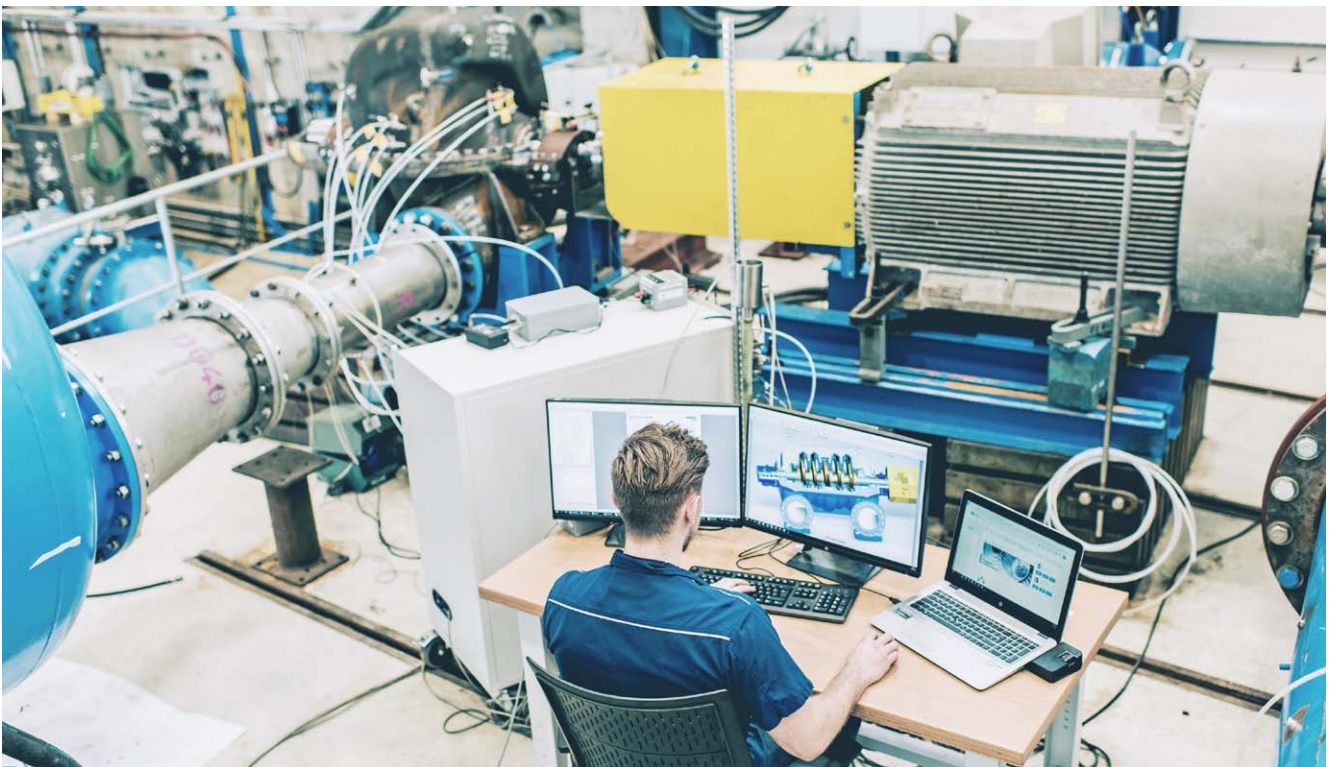
# Always a flow ahead - Research and development

Our affiliate ASTROE enjoys an internationally renowned reputation for its hydraulic developments and investigations. The high efficiency of the ANDRITZ pump series is ensured by Computational Fluid Dynamic (CFD) calculations and extensive testing carried out in our company owned laboratory.

Continuously increasing demands by customers in our operating industries emphasize the significance of R&D in the constant optimization of products and services. Today, efficiency, flexibility, and reliability over an extended lifetime are the major challenges of the market.

Our commitment to research and development forms the basis for our advances in hydraulic machine manufacturing. With ASTROE, center for hydraulic engineering and laboratory, we have an internationally renowned institute for hydraulic development work at our disposal. We are currently developing and testing our pumps and

at five locations in Austria, Germany, Switzerland, and China. Our test stands are among the most accurate in the world. By networking these research and development centers, we provide a continuous transfer of know-how within the ANDRITZ GROUP for the benefit of our customers. The main tools for R&D are numerical simulation methods as well as experimental measurements in the laboratory and on site. State-of-the-art equipment, highly precise measuring instruments as well as the latest simulation technologies, and powerful software form the basis of the high technical quality of the pumps and turbines from ANDRITZ.



# Greater efficiency for a competitive edge – Pumps service

Optimization / Modernization / Operating reliability

The conditions of your plant have changed, but your pumps are still operating as previously and therefore, are wasting energy? Would you like to optimize your system to reduce costs? With ANDRITZ, you will have a competent partner for these and numerous other services at your side.

Service and maintenance have a long tradition at ANDRITZ and complement the product portfolio. The century-long expertise is reflected not only in a service portfolio with innovative solutions and advanced products that can be optimally adapted to the respective customer needs, but also in a specially trained staff. ANDRITZ has specialized in the servicing of pumps to achieve improved efficiencies and adaptations to changed operating points of the installed pumps. A

large potential for savings can already be achieved by improving the efficiency of 20 percent of the installed pumps. Our service team provides prompt, professional, and reliable assistance – also for other manufacturers' products. Book our service package and you can be sure of the best operating reliability for your systems in the long term. We conduct an expert assessment together with you, thus creating transparency and making an optimum solution possible that is tailored to your needs. After examining your plant, we determine its savings potential and realize it by improving the efficiency of the pumps installed. Additionally, this individual solution lowers your maintenance costs. You do not have to think about personnel, nor about maintenance schedules or utilities. Assembly is conducted according to defined schedules and with assistance from our trained personnel.



## AN OVERVIEW OF OUR SERVICES

- Supply of original spare parts
- Deployment of trained personnel
- Installation and start-up
- Inspection
- Repairs, overhauls, maintenance
- Machine assessment by an expert for early fault detection
- Consulting and modernization
- Performance and vibration measurement
- Fault and damage analyses
- Feasibility studies
- Energy consulting for pumps and systems
- Preparation of maintenance schedules
- Service and maintenance agreements
- Automation and Electrical Power Systems
- Electronic equipment
- Training



## INNOVATION SINCE 1852

The internationally renowned ANDRITZ GROUP has been building pumps for more than 165 years. We offer innovative and targeted solutions with pumps and complete pumping stations. Our longstanding experience in hydraulic machine manufacturing and complete process know-how form the basis of the high standard of ANDRITZ pump engineering. Our quality and high-efficiency products as well as our understanding of customer requirements have made us a preferred partner for pumping solutions worldwide. ANDRITZ offers everything from a single source – from development work, model tests, engineering design, manufacture and project management, to after-sales service and training. We also perform complete start-up on site and guarantee our customers the best support. Our declared goal is your complete satisfaction. See for yourself!

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**ANDRITZ.COM/PUMPS**



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